Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Please amend claims 1 and 2, cancel claims 3 to 26 and add new claims 27 to 44 as follows:

1. (currently amended) A lateral flow assay device to test for the presence and/or amount of a nucleic acid sequence of interest in a sample[~~, the lateral flow device~~] comprising:

(a) a sample receiving zone for contacting the device with a sample to be tested;

(b) an extraction zone for extraction of nucleic acid from the sample;

(c) a nucleic acid amplification zone in liquid communication with the sample receiving zone; and

(d) a detection zone for detecting the product/s, directly or indirectly, of a nucleic acid amplification reaction performed in the nucleic acid amplification zone, said detection zone being[~~, or being locatable,~~] in liquid communication with the amplification zone; the device also comprising a porous matrix which, at a proximal end, is in liquid communication with the sample receiving zone such that liquid applied to the sample receiving zone flows along the device through the porous matrix by capillary action.

2. (currently amended) [~~An~~] The lateral flow assay device according to claim 1, wherein the nucleic acid amplification comprises an isothermal amplification reaction.

3 to 26 (cancelled)

27. (new) The lateral flow assay device according to claim 1, wherein the device comprises one or more reagents releasably bound on the porous matrix.

28. (new) The lateral flow assay device according to claim 27, wherein the one or more reagents releasably bound comprise one or more reagents required to perform the nucleic acid amplification reaction.

29. (new) The lateral flow assay device according to claim 1, comprising one or more reagents immobilized on the porous matrix.

30. (new) The lateral flow assay device according to claim 29, wherein the one or more immobilized reagents comprise an amplification-specific capture moiety.

31. (new) The lateral flow assay device according to claim 1, comprising a probe comprising nucleic acid releasably bound or immobilized on the porous matrix.

32. (new) The lateral flow assay device according to claim 1, wherein the sample receiving zone comprises reagents suitable to perform a nucleic acid extraction step on a sample applied to the sample receiving zone.

33. (new) The lateral flow assay device according to claim 1, comprising dodecyl trimethyl ammonium bromide, FTA paper, or a matrix comprising one or more agents for cell lysis and nucleic acid protection.

34. (new) The lateral flow assay device according to claim 1, comprising means for interruption of flow, alteration of rate of flow, or alteration of flow path, of a liquid along the porous matrix within the device.

35. (new) The lateral flow assay device according to claim 34, comprising means for altering the relative positions of two or more portions of the porous matrix, so as to affect the rate of flow of liquid from one portion to another.

36. (new) The lateral flow assay device according to claim 1, wherein the amplification reaction comprises a SMART amplification reaction involving the sequence of interest in the formation of a three way junction with two probe molecules.

37. (new) An assay kit for performing an assay to test for the presence and/or amount of a nucleic acid sequence of interest in a sample, the kit comprising a lateral flow assay device according to claim 1, and a supply of at least one reagent required to perform the assay.

38. (new) The assay kit according to claim 37, comprising a supply of carrier liquid.

39. (new) The assay kit according to claim 38, wherein at least one reagent is provided dissolved and/or suspended in the carrier liquid.

40. (new) A method of performing an assay to test for the presence and/or amount of a nucleic acid sequence of interest in a sample, comprising: contacting the sample with the sample receiving zone of a lateral flow assay device according to claim 1, so as to cause a nucleic acid amplification reaction in the presence of the sequence of interest; and detecting, directly or indirectly, the product/s of the amplification reaction in the detection zone of the lateral flow assay device.

41. (new) The method according to claim 40, wherein the amplification reaction comprises a SMART amplification reaction involving the sequence of interest in the formation of a three way junction with two probe molecules.

42. (new) The method according to claim 40, wherein the method comprises the step of performing a nucleic acid extraction step in an extraction zone of the assay device.

43. (new) The method according to claim 42, wherein the extraction step comprises contacting nucleic acid in the sample with dodecyl trimethyl ammonium bromide ("DTAB") and subsequently contacting the extracted nucleic acid/ DTAB mixture with cyclodextrin.

44. (new) The method of making a lateral flow assay device according to claim 1 comprising: forming a porous matrix comprising an amplification zone and a detection zone, said

amplification zone being in liquid flow communication with a sample receiving zone, the sample receiving zone comprising one or more reagents immobilized or releasably bound thereon so as to perform a nucleic acid extraction step on a nucleic-acid containing sample contacted with the sample receiving zone.